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- (71) Applicant (for all designated States except US): OUT-OTEC OYJ [FI/FI]; Riihitontuntie 7, FIN-02200 Espoo (FI).
- (72) Inventors; and

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(75) Inventors/Applicants (for US only): DAUM, Karl-Heinz [DE/DE]; Lennebergstrasse 17, 55124 Mainz (DE). RAUSER, Wolf-Christoph [DE/DE]; Am Berger Spielhaus, 60388 Frankfurt am Main (DE). SCHALK, Wolfram [DE/DE]; Geschwister-Scholl-Weg 4, 61267 Neu-Anspach (DE).

- (74) Agent: KEIL & SCHAAFHAUSEN; Cronstettenstrasse 66, 60322 Frankfurt am Main (DE).
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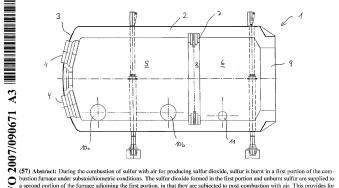
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bustion furnace under substoichiometric conditions. The sulfur dioxide formed in the first portion and unburnt sulfur are supplied to a second portion of the furnace adjoining the first portion, in that they are subjected to post-combustion with air. This provides for the production of sulfur-dioxide- containing gas free from nitrogen oxide.

INTERNATIONAL SEARCH REPORT

International application No PCT/EP2007/001128

A. CLASSIFICATION OF SUBJECT MATTER INV. C01B17/54

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Х	US 3 879 530 A (PERRET JEAN-PIERRE ET AL) 22 April 1975 (1975-04-22) column 4, line 12 - line 62; figure 1	1,2,4, 6-14, 16-19
х	US 4 966 757 A (LEWIS RICHARD A J [US] ET AL) 30 October 1990 (1990-10-30) column 3, line 54 - column 6, line 32; figure 1	1,2,6, 11,13
Х	DE 20 63 021 A1 (PETERSEN G) 13 July 1972 (1972-07-13)	13
A	claims; figure 7	1-4
Х	DE 16 67 421 A1 (TSNI I PK KOTLOTURBINY I IM PO) 10 February 1972 (1972-02-10)	13
Α	figure 1	1-12
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	1	1

•	Special	categories	of cited	documents

X Further documents are listed in the continuation of Box C. "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international

filing date "L" document which may throw doubts on priority claim(e) or which is cited to establish the publication date of another citation or other special reason (as specified)

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Date of mailing of the international search report Date of the actual completion of the international search

24 August 2007	31/08/2007
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentiaan 2	Authorized officer
NL - 2280 HV Rigwijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Zalm, Wim

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INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2007/001128

(O tim	ntion). DOCUMENTS CONSIDERED TO BE RELEVANT	PC1/EP2007/001128
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
(GB 827 627 A (HEURTEY & CIE) 10 February 1960 (1960-02-10)	13
Ą	figure 1	1-12
x	SANDER U H F ED - SANDER U H F ET AL: "PRODUCTION FROM ELEMENTAL SULPHUR" SULPHUR, SULPHUR DIXIDE AND SULPHURIC ACID. INTRODUCTION TO THEIR INDUSTRIAL CHEMISTRY AND TECHNOLOGY, LONDON, BRITISH SULPHUR CORPORATION, GB, 1984, pages 168-176, XP000606085 page 175 - page 176	13
A	page 1/5 - page 1/6	1-12

Form PCT/ISA/210 (continuation of second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP2007/001128

			101,212001,11220			
Patent document cited in search report		Publication date	Patent family member(s)		Publication date	
US 3879530	A	22-04-1975	AT BE DE ES FI FR GB IL IT JP NL NO ZA	315206 B 779901 A1 2210773 A1 400580 A1 57922 B 2128992 A5 1368210 A 38868 A 948671 B 56041562 B 7203008 A 137007 B	05-10-1972 16-06-1975 31-07-1980	
US 4966757		30-10-1990	NONE			
DE 2063021	A1	13-07-1972	NONE			
DE 1667421	A1	10-02-1972	NONE			
GB 827627	Α	10-02-1960	NONE			